

Full Size Van Safety



Full Size Van Safety Awareness

- The objective of this presentation is to increase the safety awareness of full size passenger van drivers, thus reducing the risk of accidents, especially rollovers



General Facts

- National Highway Traffic Safety Administration (NHTSA) recognizes that 12 and 15 passenger vans (include driver) are similar type vehicles and offer the same hazards to operate
- In this presentation, these vehicles will be referred to as Full Size Passenger Van(s)

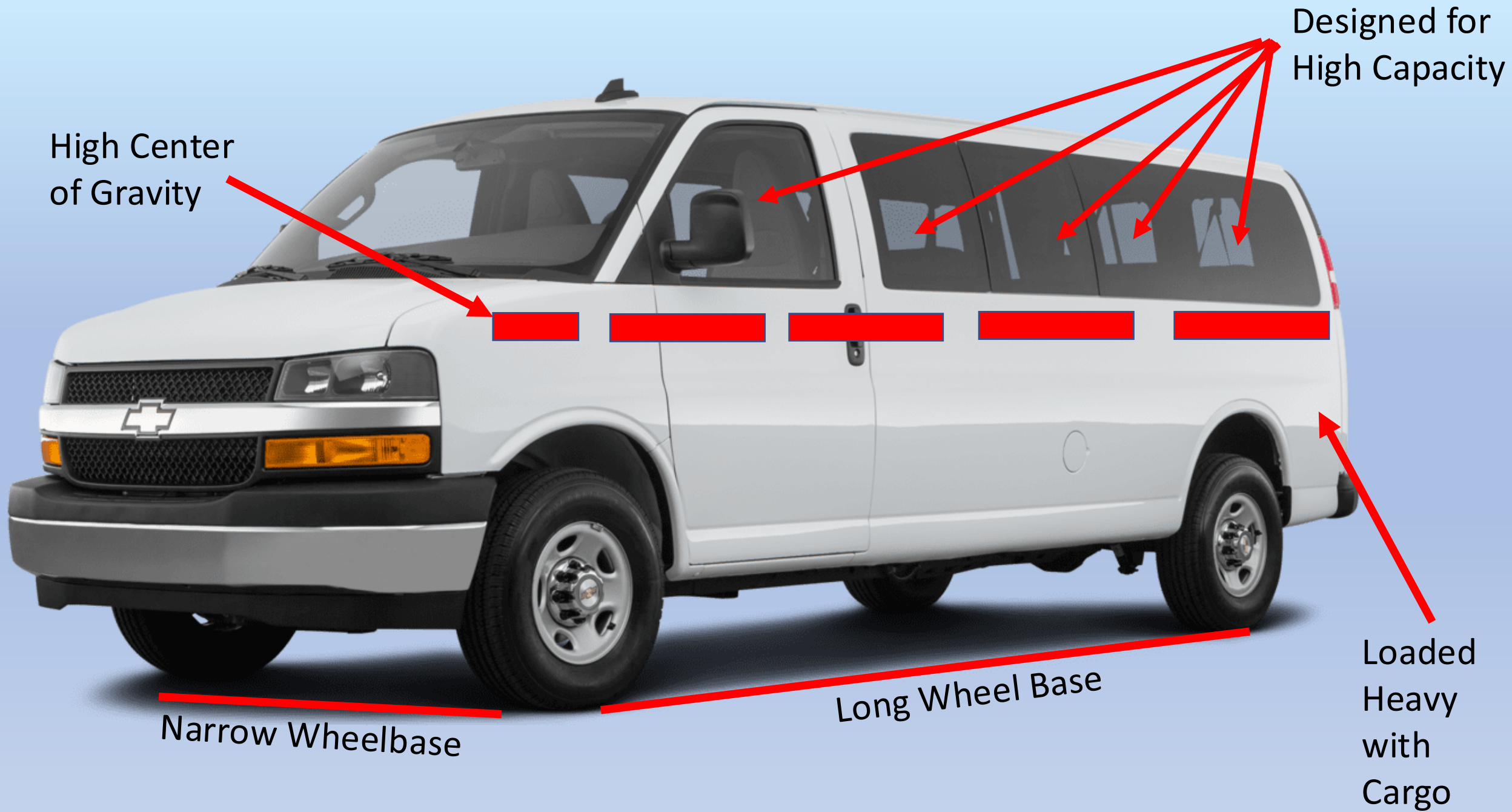


General Facts

- Full sized passenger vans have an increased rollover risk under certain conditions.
- The risk of rollover increases dramatically as the number of occupants increases from fewer than five occupants to over ten passengers.
- A 15-passenger van (with 10 or more occupants) had a rollover rate in single vehicle crashes that is nearly 5 times the rate of those that were lightly loaded.

General Facts

- Loading full size passenger vans causes the center of gravity to shift rearward and upward increasing the likelihood of rollover.
- A shift in the center of gravity will also increase the potential for loss of control in panic maneuvers.
- It is important that the van be operated by drivers that understand and are familiar with the handling characteristics of these vans, especially when fully loaded



High Center of Gravity

Designed for High Capacity

Narrow Wheelbase

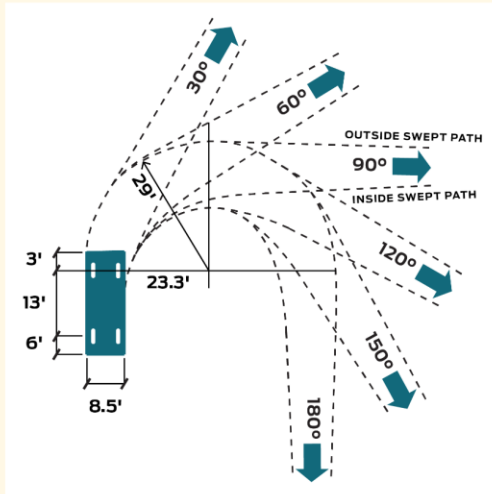
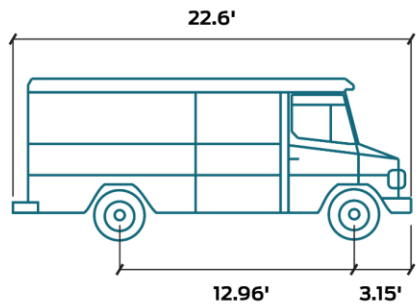
Long Wheel Base

Loaded Heavy with Cargo

General Facts

The largest frequent user of urban streets is the DL-23.

DL-23



- The turning radius for a full size van is larger than a full size car, SUV or mini-van
- It takes more room / space to turn a corner
- Example –
- Chevrolet 3500 Express Van has a 43.5- 54.5 foot turn radius
- Chevrolet Traverse – 39 foot radius

Safety Awareness

- Do not respond as safely to abrupt steering maneuvers as a car
- Requires additional braking time and distance
- More weight or higher the speed require a longer time to stop
- Adjust mirrors so that the you can barely see the edge of the van in the mirror
- When changing lanes, always check for blind spots by first leaning forward in your seat to change your sight angle and then by turning your head

From CAPR 77-1_26 December 2012 ICL 20-05 7 August 2020 – Experienced Drivers

- 2-2. Vehicle Safety Requirements
- 2.2.c. Extended vans even further increase this risk. With a high center of gravity a van can tip over more easily than cars if a driver has to negotiate sudden turns. Vans do not handle like passenger cars, they handle more like trucks. Drivers must be particularly aware of and careful to avoid conditions that could lead to rollover.
- 2.2.d. Only experienced drivers should operate the vans. Vans must not be overloaded

From CAPR 77-1_26 December 2012 ICL 20-05 7 August 2020 – Backing Up

- 2-2. Vehicle Safety Requirements
- 2.2.h. All driven COVs (except sedans) shall be equipped with operating backup alarms. (Exception is vehicles equipped with backup cameras) In areas where a vehicle operator cannot see clearly behind the vehicle, **the use of a spotter is required when backing to eliminate the chance of a mishap.** The exception to this is when another individual is not available. In this event the vehicle should be positioned, if possible, in such a way that backing is not required.
- *It is still a good practice to use a spotter, even when equipped with a backup camera*

Safety Awareness – Backing Up

- The biggest blind spot is directly behind the vehicle.
- 70% of van crashes involve backing into a stationary object.
- Make an allowance for the extended length of the van behind the rear wheels
- Avoid backing up whenever possible
- Park parallel with curb may be an option



Safety Awareness

- Adjust mirrors so that the you can barely see the edge of the van in the mirror
- When changing lanes, always check for blind spots by first leaning forward in your seat to change your sight angle and then by turning your head



From CAPR 77-1_26 December 2012 ICL 20-05 7 August 2020 – Seat Belts

- 2.2.a. Seat belts or seat belt/shoulder harness combinations must be used by all occupants of COVs. Do not transport more people in a vehicle than there are seat belts to accommodate them.



Seatbelts

- According to the NHTSA, 80% of people killed in rollover crashes were not wearing their safety belt.
- Many injuries and deaths attributed to full size vans are a result of ejection. Once vans begin to roll over, many people are killed because they did not use seatbelts.
- This is the result of poor supervision by the driver and senior occupants who fail to ensure that all passengers are buckled up.

From CAPR 77-1_26 December 2012

ICL 20-05 7 August 2020 – Operation of Full Size Van

- 2.2.e Operators of all vehicles, but especially 15-passenger vans, should not make sharp turns, use excessive speed and should avoid abrupt maneuvers. In addition for 15-passenger vans, rear seats must be removed (in concern for load distribution and handling characteristics).
- 2.2.e (1) Removing the rear seat creates a large area in the rear of the van which can be used for luggage and support equipment. Limit the weight of cargo in this area to **300 pounds**, and do not stack items above the top of the rear seat. **Cargo netting must be used to secure items stowed in this area.**

General Facts

- Do not overload your vehicle
- Passengers should be distributed evenly from side to side for balance and sit towards the front of the vehicle
- No loading on the roof



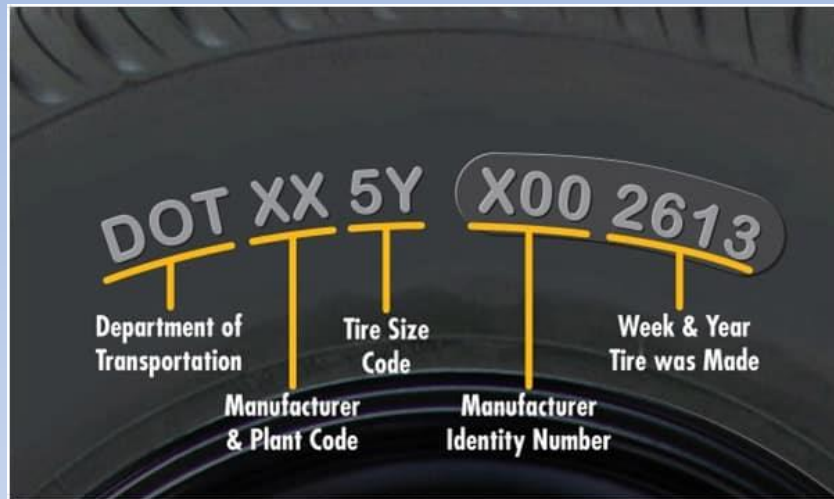
From CAPR 77-1_26 December 2012 ICL 20-05 7 August 2020 – Operational Inspection

- 2.1 Vehicle Inspections
 - a. Prior to first use of the day, vehicle operators will perform a safety check on COVs and TUVs using CAPF 73, CAP Vehicle Inspection Guide and Usage Data. During the inspection, all items found not to be in **safe** working order must be corrected before placing the vehicle in service.

From CAPR 77-1_26 December 2012

ICL 20-05 7 August 2020 - TIRES

- Inspect tires for uneven wear patterns on the tread, cracks, foreign objects, dry rot or other signs of wear or trauma during daily inspection
- Check the tire age. Replace all tires, including the spare if they were manufactured more than six years ago.



Tires

- Check tire pressure - all **Five** tires
- Line 20 on the CAPF 73 *CAP Vehicle Inspection Guide and Usage Data*
- Requires signature to certify that all tire pressures were checked using a tire pressure gauge at least once during the month



From CAPR 77-1_26 December 2012 ICL 20-05 7 August 2020 – Vehicle Inspection

- 2-1. Vehicle Inspections.
- a. Prior to first use of the day, vehicle operators will perform a safety check on COVs or TUVs using CAPF 73, CAP Vehicle Inspection Guide and Usage Data. During the inspection, all items found not to be in safe working order must be corrected before placing the vehicle in service. When a POV is used for official CAP transportation it will have a safety check performed using CAPF 73, prior to use. **A POV will not be used if not in safe working order.**
 - COV – Corporate Owned Vehicles
 - TUV – Temporary Use Vehicles
 - POV – Personal Owned Vehicles

| CAP VEHICLE INSPECTION GUIDE AND USAGE DATA | | |
|--|---|--------------|
| MONTH / YEAR | END OF MONTH ODOMETER READING | |
| WING / REGION | CHARTER | |
| VEHICLE IDENTIFICATION NO. (VIN) | YEAR OF VEHICLE | |
| VEHICLE MAKE | VEHICLE MODEL | FIELD ID NO. |
| ITEMS TO BE CHECKED DAILY <i>(operator's signature required on inside page to verify inspection)</i> | | |
| 1. | REGISTRATION / PROOF OF INSURANCE | |
| 2. | DAMAGE <i>(exterior and interior, missing parts)</i> | |
| 3. | TIRES <i>(visually check for damage / abnormalities)</i> | |
| 4. | CHECK FLUID LEVELS <i>(oil, transmission, brake, power steering and coolant) according to manufacturers instructions.</i> | |
| 5. | BATTERY CONDITION | |
| 6. | LEAKS <i>(visually check fuel / oil / coolant)</i> | |

- Item 3
- Part of the daily safety check
- Look for tire wear and damage

| | |
|-----|--|
| 14. | MIRRORS <i>(rearview / side)</i> |
| 15. | EXHAUST SYSTEM |
| 16. | WINDOWS <i>(functionally check proper operation)</i> |
| 17. | RADIO MOUNTS <i>(CAP added equipment)</i> |
| 18. | CURRENT STATE INSPECTION STICKER <i>(if applicable)</i> |
| 19. | TIRE PRESSURE <i>(checked monthly – requires signature and date below)</i> |
| | Signature: _____ Date Performed: _____ |

- Signature of CAP member who checked tire pressures, including the spare.
- Required monthly.

General Facts



- 60% of van rollovers are the result of under-inflated tires.

Driving Awareness

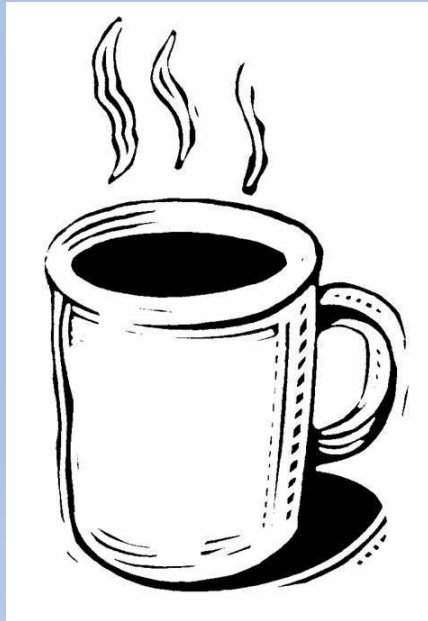
- A speed that may be acceptable in a passenger car could be dangerous in a van.
- As the van is loaded with passengers, the center of gravity shifts upward above the wheels. The higher the number of passengers, the greater the likelihood of a rollover, as more weight shifts towards the rear . Always fill the front seats first.
- The shift in the center of gravity will also increase the potential for loss of control in panic maneuvers.
- Soft shoulders and culverts pose a hazard in rural areas.

Driving Awareness

- Drive conservatively
- Avoid excessive speed and abrupt maneuvers
- Drive 5 mph slower than the posted limit on entrance/exit ramps and sharp curves.
- Do not drive tired
- Do not drive in bad weather, if possible
- Take rest breaks often (every 2 hours is recommended)
- Wear seat belts at all times when the vehicle is in motion
- Drive only during the day, if possible.
- Require someone to be awake in the front seat with the driver on long trips

Driving Awareness

- Caffeine, loud music, cold air are only temporary cures for fatigue



Credits

